



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

JUL 13 2015

REPLY TO THE ATTENTION OF:
WN-16J

Paul Higginbotham, Chief
Office of Water Quality Permits Branch
Indiana Department of Environmental Management
100 North Senate Avenue; IGCN 1255
Indianapolis, Indiana 46204-2251

Re: U.S. Environmental Protection Agency Review of Pre-public Notice NPDES Permit, US Steel Gary Works, Gary, IN, Permit No. IN0000281

Dear Mr. Higginbotham:

The U.S. Environmental Protection Agency (EPA) has reviewed the Pre-public Notice National Pollutant Discharge Elimination System (NPDES) Permit, fact sheet, and supporting documents for the US Steel Gary Works that was received on May 1, 2015, and subsequent revisions submitted to EPA on June 9, 10, 19, and 30, in response to EPA's comments. Based on our review to date, EPA would not object to issuance of the revised permit. Our position could change if any of the following occur:

- a. Prior to the actual date of issuance of a Proposed Permit, an effluent guideline or standard is promulgated which is applicable to the Permit and which would require revision or modification of a limitation or condition set forth in the Draft Permit;
- b. A variance is granted and the Permit is modified to incorporate the results of that variance;
- c. There are additional revisions to be incorporated into the Permit which have not been agreed to by EPA; or
- d. EPA learns of new information, including as the result of public comments that causes EPA to reconsider its position.

Subject to the above conditions, the permit may be issued in accordance with the Memorandum of Agreement and pursuant to the Clean Water Act. Although we do not intend to object, EPA recommends that you consider and address the additional recommendation provided in Enclosure A in order to improve the clarity and accuracy of the permit. Also in Enclosure A are issues raised by EPA that have been resolved and were incorporated into the final version submitted to EPA on June 30, 2015.

When the Proposed permit is prepared, please forward a copy and any significant comments received during any public notice period to r5npdes@epa.gov. Please include the EPA permit number, the facility name, and the words "Proposed Permit" in the message title. If you have any technical questions related to EPA's review, please contact David Soong at (312) 886-0136 or at soong.david@epa.gov.

Thank you for your cooperation during the review process and your thoughtful consideration of our comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin M. Pierard", is written over a horizontal line.

Kevin M. Pierard, Chief
NPDES Programs Branch

Enclosure A

cc: Stan Rigney, IDEM
Nikki Gardner, IDEM

Enclosure A

U.S. Environmental Protection Agency
US Steel Gary Works
Permit No. IN0000281

EPA recommends the following be addressed to improve the clarity and accuracy of the Permit

EPA Comment: According to 327 IAC 2-1.5-8(c)(4)(D)(iii): “The normal daily and seasonal temperature fluctuations that existed before the addition of heat due to other natural causes shall be maintained.” EPA recommends that this be assessed.

The following are items that EPA raised during the review and have been incorporated into the Permit

Permit – Thermal – Lake Michigan:

EPA Comment: p.102. It is unclear what the applicable thermal limits are for each outfall. Item g. states BTU limit as measured at outfall 35. EPA recommended the Permit clarify what limit applies at each of the outfalls.

IDEM Response: The limit applies to Outfall 035 only. The phrase “to be measured” was removed from Permit Part III.A.2.g.

Fact Sheet – Thermal – Lake Michigan:

EPA Comment: p.92. Same comments as Permit. EPA recommended that the Fact Sheet provide clarity on what RP results were and how limits were calculated for each outfall. If there is a mixing zone study supporting 1000 ft arc compliance, cite it. If just calculations, include them in the FS or reference where they are.

IDEM Response: This section was clarified using the information previously included in 6.3.2(C).

EPA Comment: p.93. If Lake Michigan discharges are not subject to ATELS, then strike references from ATEL discussions in C. Facility Specific. These should be moved to 6.3.1 rather than in 6.3.2. This says that 035 is representative of 037 and 039, but could be clearer.

IDEM Response: Detailed discussion involving Lake Michigan was moved to 6.3.1.

Permit – Thermal – Grand Cal:

EPA Comment: p.99. EPA recommended the Permit clarify references to outfalls vs monitoring points.

IDEM Response: The requirement specific to outfalls as opposed to monitoring points in Part III.A.1.e. have been moved to the Tables in part I of the Permit as appropriate (Outfalls 005, 015, 018, 019, 020, 028, 030, and 034).

Fact Sheet – Thermal – Grand Cal:

EPA Comment: p.94. EPA recommended combining Sections D and E as Section E is a confusing. In first paragraph of D, insert WQBEL table and then go to paragraph 2 where it says USS requested ATELS. Provide cite to demonstration with dates.

IDEM Response: This section was cleaned up. “D” and “E” were combined, with the WQBELs discussed first.

EPA Comment: p.95. If the fish community study is scheduled to be completed in June 2015,

Enclosure A

U.S. Environmental Protection Agency
US Steel Gary Works
Permit No. IN0000281

EPA recommended including an assessment of this study in the draft Permit if possible rather than a reopener. It seems problematic to put a draft Permit out, prepare a proposed Permit and then potentially modify the final Permit based upon a study that was available during the Permit development process. If it were submitted during the PN period, EPA recommended it be considered as a significant comment/information received if it indicates any concerns with the ATEls that are proposed to be renewed.

IDEM Response: If the fish study results are received during the PN, the data will be reviewed and included in the Permit and Fact sheet as appropriate. Changes will be made as warranted.

Permit – 316(b):

EPA Comment: p.109. Conditions 1 and 2 seem in conflict. One states all application materials are due with next Permit application while the other states a proposed timeline for submittal should be developed. The rule requires an alternative schedule to be set so the Permit needs to be clear. The timeline requirement could be modified to just say a schedule for development of the information. It would be better to have this prior to Permit issuance as part of Permit admin record. It would not be a Permit requirement, but informational so could be flexible i.e. requirement to submit with next application is formal alternative schedule.

IDEM Response: Alternate schedule language was removed from the Permit and Fact sheet.

EPA Comment: p.101. EPA recommended that Section E be included with Section D and subsections made for clarity or the title improved. Also EPA recommended assessing options for each intake rather than a holistic approach that makes it hard to determine which topic applies to which intake.

IDEM Response: Sections “D” and “E” were combined under a new heading of US Steel fish Return and Options Evaluations. The holistic approach was used to present the information as this was how the information was provided to IDEM. Breaking this out into headings for each pump station will add unnecessary length to the document. Instead, IDEM added Pump Station identifiers to each heading.

EPA Comment: p.103. EPA recommended that the summary and key findings should summarize the results of the fish return evaluation as well.

IDEM Response: IDEM made this change.

EPA Comment: A number of the downstream outfalls discharge pollutants that took into account the ambient background concentrations and flow from outfall 005 in determining the reasonable potential to exceed the water quality criteria for those pollutants. EPA recommended that at the Permit modification, the reasonable potential to exceed the water quality criteria for those pollutants be reassessed taking into account the reduction in flow from the elimination of outfall 005. Some of the flow will be rerouted to outfall 015, but it will be reduced. Limits (including the ATEls) should be required as appropriate after taking into consideration the new discharge conditions after elimination of outfall 005. EPA recommended discussing this future assessment in the Fact sheet for clarity so that the public better understands the impacts of the closure of outfall 005 and how IDEM will address the change in discharge at Permit modification.

IDEM Response: IDEM included a brief discussion in the Fact Sheet (section 5.3) to explain that

Enclosure A

U.S. Environmental Protection Agency
US Steel Gary Works
Permit No. IN0000281

as part of the Permit modification, RPE will be re-evaluated to account for the change in ambient background concentrations and flow from Outfall 005. Additionally, IDEM included a brief discussion in the Fact Sheet (section 6.3.2(D)) to explain that the Permit modification should assess the impact of the elimination of outfall 005 on the ATEL demonstration and that USS should be prepared to support the continuance of the ATELS with an updated demonstration reflecting the change in discharge when 005 is eliminated.

EPA Comment: On page 108 of the Permit, item h. EPA recommended item h be deleted as it will only be necessary after closure of outfall 005. IDEM should process a Permit modification prior to closure of outfall 005 to ensure that the change in discharge is properly reflected in the effluent limitations.

IDEM Response: IDEM removed item h.

EPA Comment: IDEM and USFWS have identified some issues with the sampling methods used by USS in collection of the impingement and entrainment data during the last Permit term at the different cooling water intake structures in operation at the facility. The sampling methods were changed from the approved sampling plan without notifying IDEM of the changes. EPA believes that the issues are important and USS should be required to conduct additional studies to resolve the questions raised by IDEM and USFWS.

The current draft of the Permit requires USS to submit a new study plan for the collection of the application materials required by the federal 316(b) Existing Facility Rule that became effective in October 2014, but there is no discussion of the identified issues in the Fact sheet or Permit. EPA recommended a discussion in the Fact sheet of the issues or a reference to a letter that provides these issues to USS to ensure that the required study plan addresses the issues. IDEM should also consider including a requirement to notify IDEM of any deviations from the approved study plan to ensure changes are not made without the chance for IDEM to provide further direction.

IDEM has also set the schedule for submittal of the 316(b) application materials to be with next Permit renewal application. Given the complexity of the intakes at this facility and the pressure to reissue Permits in IN promptly, EPA recommended setting an earlier date for submittal to ensure adequate time for review by IDEM, US FWS and EPA.

IDEM Response: IDEM has had at least one phone conversation with the Permittee and discussed our concerns regarding methodology. USS is also aware that additional studies may be necessary due to our concerns with the methodology. They are willing and able to discuss study plan development with our Biological staff as we move through the process. IDEM proposes to add a requirement for the Permittee to notify IDEM if any changes are proposed to an approved study plan.

Technology Based Effluent Limits:

EPA Comment: Part I.A.2 Effluent Limitations Table of internal Outfall 501, The following deficiency was noted: the TSS, and Oil and Grease's mass limits do not meet the federal ELGs and shall be recalculated using the reduced production rate and based on 1982 NSPS (1982 40 CFR 420.14(a)), see FR Vol. 67 10/17/2002, p. 64232, which states that:

"EPA's regulation at 40 CFR 122.29(d)(1) specify the precise duration of this grace period.

Therefore, the discharges subject to any more stringent applicable BPT/BCT/BAT limitations.

Enclosure A

U.S. Environmental Protection Agency
US Steel Gary Works
Permit No. IN0000281

This means that facilities currently subject to the 1982 NSPS or PSNS remain subject to those standards during a ten-year period beginning on the date of completion of the new source or during the period of depreciation or amortization of such facility, whichever period ends first. After such time, the BAT and PSES limitations promulgated today apply to those dischargers for toxic and nonconventional pollutants. For direct dischargers, limitations on conventional pollutants will be based on the formerly promulgated BPT/BCT segment applicable to the discharger or on the 1982 NSPS for conventional pollutants, whichever is more stringent."

The 30-day Average and 1-day Max. of TSS, and Oil and Grease should recalculate using the reduced production rate at 3331 tons/day (the production rate found at Fact sheet) instead of 3950 tons/day, and based on the 1982 NSPS for conventional pollutants, which is more stringent than 40 CFR Part 420.12(a).

Parameter	1982 NSPS Limits	
	30-day Avg	1-day Max
TSS	596	1146
Oil and Grease		42.5

TBELs calculation based on 1982 NSPS:

1-Day Maximum

TSS: $(0.172 \text{ kg/kg}) \times (3331 \text{ tons/day}) \times 2 \text{ lbs/kg} = 1146 \text{ lbs/day}$

O & G: $(0.00638 \text{ kg/kg}) \times (3331 \text{ tons/day}) \times 2 \text{ lbs/kg} = 42.5 \text{ lbs/day}$

30-Day Average

TSS: $(0.0894 \text{ kg/kg}) \times (3331 \text{ tons/day}) \times 2 \text{ lbs/kg} = 596 \text{ lbs/day}$

The following items, may include but are not limited to, need also be modified and consistent with the above recalculated limits as well:

1. TBELs calculations Excel spread sheet;
2. Fact Sheet, p.58, Table 5.2.1 of Outfall 501 and its footnote;
3. Fact Sheet, p.77, the Effluent Limitation Table of Outfall 501.

EPA recommended this be corrected.

IDEM Response: Permit manager error. These items have been corrected.

EPA Additional Comment: p.128 of the Fact sheet, Effluent Limitations Table 17 for internal Outfall 501. EPA recommended this table be modified and consistent with the above recalculated limits as well.

IDEM Response: Table 17 has been corrected and included in the Fact Sheet. Tables 17-21 have been edited to include references to the SMVs, which created the need for an additional Table (22) due to space.

Compliance Schedule:

EPA Comment: The draft Permit includes the new WQBELs for Free Cyanide at Outfalls 015 and 019, and Zinc at Outfall 041A/B; and there are pending compliance schedules in the draft Permit Part I.Q. EPA recommended that if the draft Permit include compliance schedules for achievement of new WQBELs for Cyanide and Zinc; Part I.Q of the draft Permit should meet 40

Enclosure A

U.S. Environmental Protection Agency
US Steel Gary Works
Permit No. IN0000281

CFR 122.47(a) and 40 CFR 123.25(a)(18) which allows for schedules of compliance in NPDES Permits, but only “when appropriate,” and only when the schedule of compliance requires achievement of compliance “as soon as possible”.

IDEM Response: The proposed SOC were included in the updated documents, based on the Permittees comments on the Pre PN draft review.

EPA Additional Comment: EPA recommended that the above three (3) Effluent Limitations Tables should be modified and include “Final” WQBELs, and “Interim” monitoring and reporting requirements for new WQBEL parameters for Outfalls 015, 019 and 041A/B since the compliance schedules were granted. We suggest the footnote [15] or [8] of the above three (3) Effluent Limitations Tables should be modified to reflect that compliance schedules were granted. The following or similar language may be used “The Permittee has up to forty-five (45) months, as outlined in Part I.Q. of the Permit in which to meet the final effluent limitations for free Cyanide (or Zinc). The interim limitations shall apply until the final limits take effect.”

Part 6.1 of the Fact sheet, EPA recommended the three (3) Effluent Limitations Tables should be modified in the Fact Sheet as well, since the compliance schedules were granted.

IDEM Response: IDEM made these changes.

Sampling Types:

EPA Comment: Ammonia’s sampling type. The following Discharge Limitation Table at Outfall 023 indicates that the ammonia sample type is grab. 40 CFR 122.21(g)(7) – Effluent Characteristics indicates that “Grab samples must be used for pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, fecal coliform and fecal streptococcus. For all other pollutants, 24-hour composite samples must be used.” EPA recommended the use of 24-hour composite samples as opposed to grab samples for ammonia to be consistent with other Outfalls.

IDEM Response: IDEM changed the sample type for Ammonia at Outfall 023 to 24 hour Comp.

Water Treatment Additives:

EPA Comment: Water Treatment Additives, EPA recommended updating the second sentence of the footnote as follows or similar language: “In the event that changes are to be made in the use of water treatment additives including dosage rates beyond the approved estimated maximum dosage rates, or changes that could significantly change the nature of, or increase the discharge concentration of the additive contributing to this Outfall, the Permittee shall notify the Indiana Department of Environmental Management as required in Part II.C.1 of this Permit.”

The footnote of the following Outfalls need revision as well: Outfalls 005, 015, 018, 019, 020, 021, 023, 026, 028/030, 028, 033, 034, 035, 037, 039; and Part 5.8 of the Fact sheet.

IDEM’s Response: IDEM made this change.

Streamlined Mercury Variance (SMV):

EPA Comment: Part I.A.1 the footnote [7] refers to Part I.R, but Part I.R does not exist (you will also find similar issues at the footnote for Outfalls 015, 018, 019, 020, 028/030, 034.). EPA recommended correcting these footnotes.

IDEM Response: The footnotes were corrected to reference Part I.P.

Enclosure A

U.S. Environmental Protection Agency
US Steel Gary Works
Permit No. IN0000281

EPA Comment: SMV compliance determination: EPA recommended the draft Permit include a footnote that explains how to determine if the discharge meets the interim discharge limit. Add a footnote and consider using language similar to language included in the BP Permit:

“For the term of this Permit, the Permittee is subject to the variance discharge limit developed in accordance with 327 IAC 5-35-8.

The Permittee shall at all times continue to operate and maintain the wastewater treatment system(s) in good working condition to minimize the discharge of Mercury. See Part V.5 of the Permit for the Mercury Pollution Prevention Management Plan Requirements.”

IDEM Response: IDEM agreed to add the following requirement to Part I.P. of the Permit “The Permittee shall at all times continue to operate and maintain the wastewater treatment system(s) in good working condition to minimize the discharge of Mercury.” However, the other requirements mentioned are already in the Permit under Part I.P.; creating an additional footnote is not necessary.

EPA Comment: Mercury SMV renewal, Part I.H of the draft Permit; EPA recommended adding the reopening clause or similar language when IDEM determines that the mercury control technologies available:

“If a treatment technology for the removal of mercury from wastewater is identified and is determined by IDEM to be available and economically viable, then the Permittee must install and fully operate that treatment technology as soon as possible. Within 6 months after IDEM’s determination or the final disposition of any appeal of such determination, whichever is later, the Permittee shall submit a schedule, subject to IDEM approval, for the installation and operation of the identified treatment technology that is as expeditious as possible. Any such determination shall be considered final agency action, which the Permittee may appeal. Upon completion of 12 months of operation, IDEM should modify the Permit in accordance with 327 IAC 5-3.5-8 to revise the effective effluent limits for mercury at Outfalls 005, 015, 018, 019, 020, 034, and 028/030.”

IDEM Response: IDEM agreed to include this reopener in Part I.H. of the Permit.

Upset Conditions:

EPA Comment: Under 40 CFR 122.41(n), the affirmative defense of “upset” is only available where the Permittee can demonstrate that the conditions specified at 40 CFR 122.41(n)(3) are met. One of those conditions is that the Permittee must demonstrate that “an upset occurred and that the Permittee can identify the cause(s) of the upset.” 40 CFR 122.41(n)(3)(i). Thus, the upset defense is not available in situations where the Permittee is unable to identify the cause(s) of the upset. The upset provisions in Part II.B.3 of the draft Permit appear to be inconsistent with this federal requirement. Specifically, Part II.B.3.c(i) provides that the Permittee must demonstrate, among other thing, that “an upset occurred and the Permittee has identified the specific cause(s) of the upset, if possible” (emphasis added). Thus, it appears that a Permittee could establish the upset defense under the draft Permit provisions without identifying the cause(s) of the upset. EPA recommended deleting the phrase “if possible.”

IDEM Response: IDEM deleted “if possible”.

Enclosure A

U.S. Environmental Protection Agency
US Steel Gary Works
Permit No. IN0000281

Landfill Leachate Discharge:

EPA Comment: If there is no landfill leachate monitoring data available for the following three parameters: Benzoic acid, P-Cresol, and α -Terpineol at internal Outfall 607 EPA recommends the Permit establish BPJ monitoring requirements for the landfill leachate discharge for these parameters at internal Outfall 607. The BPJ monitoring requirement is based on 40 CFR Part 445 which regulates landfill leachate discharges.

IDEM Response: After additional research, IDEM proposed to require monitoring for p-cresol, 1 X Month, for 12 months.

Environmental Justice:

EPA Comment: EPA expressed concern about the facility being located in an Environmental Justice area. The US Steel Gary Works facility is located in an Environmental Justice area and recommended IDEM consider opportunities to further enhance communication with the local communities, such as when the draft NPDES Permit renewal is public noticed.

IDEM Response: Noted.

Stormwater:

EPA Comment: Part I.D.4.a (Technology-Based Effluent Limits). EPA recommended to removal of the last sentence: "In minimizing exposure, ..."

IDEM Response: Sentence was removed.

EPA Comment: Part I.D.4.b Technology-based Effluent Limits: First paragraph of this provision should end at the top of page 51 with "...in appropriate containers." EPA recommended to start a new paragraph with "Identify and control all on-site sources of..."

IDEM Response: Sentence was corrected.

EPA Comment: Part I.D.5 (Annual Review): The previous Permit required: "At least once every 12 months, you must review the selection, design, installation, and implementation of your control measures to determine if modifications are necessary to meet the effluent limitations of this Permit, including the provisions of Part J.5. You must document the results of your review in a report that shall be retained within the SWPPP. You must also submit the report to the Industrial NPDES Permit Section on an annual basis. Failing to conduct the annual review of the selection, design, installation, and implementation of your control measures and reporting your results to Industrial Permit Section is a violation of the Permit." This provision now only appears to require annual reporting information to be sent to IDEM with no review by the Permittee. EPA recommended revising to include language similar to previous Permit.

IDEM Response: The new language was drafted based on the most recent MSGP. However, based on this comment, IDEM proposed to use a combination of the language, and the introductory paragraph now states: "At least once every 12 months, you must review the selection, design, installation, and implementation of your control measures to determine if modifications are necessary to meet the effluent limitations in this Permit. You must document the results of your review in a report that shall be retained within the SWPPP. You must also submit the report to the Industrial NPDES Permit Section on an annual basis. At a minimum, the Annual Report should include the following:"

Enclosure A

U.S. Environmental Protection Agency
US Steel Gary Works
Permit No. IN0000281

EPA Comment: Part I.D.5.c (Annual Review) and Part I.D.6.a(5) (Corrective Actions). These provisions refer to “benchmark” monitoring. EPA recommended the Permit use the analogous “baseline” process described in Part I.F.2.f to determine how well the controls are implemented. Any references to benchmarks should be removed from this provision.

IDEM Response: IDEM replaced references to benchmark(s) with baseline(s).

Miscellaneous

EPA Comment: p.56 of the Fact sheet, Part 5.2.1, Cokemaking. EPA recommended adding Bap, TSS, O&G, and Naphthalene as they are also the parameters that the federal effluent guidelines have limited, see 40 CFR Part 420.12, 13, and 14.

IDEM Response: Bap, TSS, O&G, and Naphthalene were added to the sentence.

EPA Comment: Part I.C.3 defines “Monthly Average”, and “Daily Maximum” ... we noticed the mercury interim discharge limit is Annual Average basis and recommended the Permit define “Annual Average.”

IDEM Response: Yes; in Part I.P.2. “The interim discharge limit is the Annual Average. Compliance with the interim discharge limit will be achieved when the annual average measured over the most recent (rolling) twelve-month period is less than the interim discharge limit. Compliance with the interim discharge limit will demonstrate compliance with mercury discharge limitations of this Permit for this outfall.” IDEM proposed to add the language to the appropriate footnotes in the tables in Part I as well.

EPA Comment: Part I.A.1 the footnote [13] of the Discharge Limitations of Outfall 005, EPA recommended the certification should add the following wordings “...under penalty of law....”. Change the certification statement to the following:

“I certify under penalty of law that, to the best of my knowledge and belief,...”

IDEM Response: IDEM added this language.